

REMARKS

The Applicants wish to thank the Examiner for his review of the present application. Claims 69-72, 75-77, and 80-120 are currently pending. Applicants have amended claims 69-72, 75, 77, 80-85, and 88-89. Applicants have cancelled claims 78-79 herewith and claims 73-74 were previously cancelled. Claims 76, 86-87 were previously presented. Applicants have added new claims 90-120. No new matter has been added.

35 U.S.C. §103(a)

The office action rejects claims 69, 70, 75-81, and 84-89 under 35 U.S.C. §103(a) as being unpatentable over Delp et al. (U.S. patent no. 5,682,886), hereinafter referred to as “Delp” in view of Berry (U.S. patent no. 5,895,428), hereinafter referred to as “Berry.”

Amended independent claims 69 and 80 define, in relevant part, methods of evaluating a joint comprising obtaining anatomical information from image data of a joint, determining biomechanical data associated with the joint, and combining the anatomical information and the biomechanical data to evaluate a joint. In claim 69, the biomechanical data comprises at least data concerning relative motion of the joint. In claim 80, the biomechanical data comprises at least data concerning contact area between two components of the joint.

Delp fails to teach such methods, because, among other reasons, Delp does not disclose the use of biomechanical data as disclosed in the present application. Delp discloses a method for planning a surgery that focuses on the identification and correction of anatomical features. (See, e.g., Delp Abstract and Summary of the Invention.) In particular, Delp obtains image data of the patient's leg and then generates a three-dimensional anatomical model of the bones (col. 8, lines 32-65). Delp does not teach or suggest a method of evaluating a joint that includes both obtaining anatomical data from an image and also determining biomechanical data associated with the joint. Similarly, Delp does not disclose either a method for determining relative motion of a joint as claimed in amended claim 69 or a contact area of a joint as claimed in amended claim 80.

Berry fails to teach the deficiencies of Delp. Berry does not teach or suggest many of the elements of the present claims, including determining biomechanical data associated with the

joint and combining that data with anatomic information to evaluate a joint.

Accordingly, because neither Delp nor Berry teach or suggest, alone or in combination, all limitations of amended claims 69 or 80, the combination cannot make the claims obvious. Additionally, claims 70-72, 75-77, and 88-100, which depend from claim 69, and claims 81-87 and 101-120, which depend from claim 80, are allowable for at least the same reasons.

The office action further rejects claims 69, 70, 71, 72, 76, 80, 81, 82, 83 and 86 under 35 U.S.C. 103(a) as being unpatentable over Kshirsagar et al. (Investigative Radiology, vol. 33, no. 5; hereinafter "Kshirsagar") in view of Delp and Berry.

As discussed above, neither Delp nor Berry disclose all of the elements of the claims. Additionally, Kshirsagar fails to render obvious the elements missing from both Delp and Berry. Kshirsagar teaches a method of measuring localized cartilage volume and thickness of human knee joints by analyzing three-dimensional MRIs. As indicated in the office action, Kshirsagar fails to teach or suggest determining biomechanical data of the joint or combining that with anatomical information to evaluate a joint.

Accordingly, because none of Kshirsagar, Delp and Berry teach or suggest, alone or in combination, all limitations of amended claims 69 and 80, the combination cannot make the claims obvious. Further, the combination of Kshirsagar, Delp and Berry cannot render claims 70, 71, 72, 76, 81, 82, 83 and 86 obvious, because they depend from claims 69 and 80.

The office action rejects claims 69, 70, 76, 80, 81, and 86 under 35 U.S.C. 103(a) as being unpatentable over Pelletier et al. (U.S. Patent No. 6,560,476), hereinafter referred to as "Pelletier," in view of Delp and Berry.

As discussed above, neither Delp nor Berry disclose all of the elements of the claims. Moreover, Pelletier fails to render obvious the elements missing from both Delp and Berry. Pelletier also fails to teach the claimed methods, because Pelletier, alone or in combination with Delp and Berry, also does not disclose all of the elements independent claims 69 and 80. Pelletier discloses an orthopedic magnetic resonance imaging system for evaluating disease progression, and, in the primary embodiments, compares the imaged cartilage to prior images to determine the progression of the disease. Pelletier fails to teach or suggest the determination of biomechanical data as claimed as well as the combination of biomechanical data with anatomical

information to evaluate the joint.

Accordingly, because neither Pelletier, Delp, nor Berry teach or suggest, alone or in combination, all limitations of amended claims 69 and 80, the combination cannot make the claims obvious. Additionally, claims 70, 76, 81, and 86, which depend from claims 69 and 80, are allowable for at least the same reasons.

It is believed that the application is now in order for allowance and Applicants respectfully request that a notice of allowance be issued. Applicants believe that a three month extension of time is required and request that the associated fee be charge to deposit account number 19-4972. Applicants also request that any additional fees required by this paper be charged to or any overpayments be credited to deposit account number 19-4972. Applicants also request that the examiner contact the undersigned, if it will assist in processing this application through issuance.

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Respectfully submitted,

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